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09/658,796	09/11/2000	Fredric Artru	8X8S.258PA	4140
7590 02/25/2004			EXAMINER	
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1270 Northland Drive			2664	
St Paul, MN 55120			PAPER NUMBER	

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/658,796

Applicant(s)

ARTRU ET AL.

Examiner

Kevin Mew

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

*Detailed Action*

*Specification*

1. Claims 1, 11, 17, & 18 are objected to because of the following informalities: the phrase “e.g., by broadcasting its identity and waiting for a communication assignment,” given as an example of the limitation “endpoint device is configured and arranged to automatically locate communication with the unique internet-based private branch exchange,” should be removed from the claim specification for better reading of the claim.

Claim 3 is objected to because of the following informalities: the connection word “and” in line 3 of the claim should be replaced with the word “or” to reflect that the packet-communicating endpoint devices could only be one of the devices set forth in the claimed invention.

Claim 10 is objected to because of the following informalities:

the phrase “video, audio, etc.,” given as an example of the limitation “a type of media,” should be removed from the claim specification for better reading of the claim.

the phrase “see above claims 4-9” does not specify what limitations of claims 4-9 are being referred to. It is suggested this phrase be replaced with the limitations intended to be included for the plurality of search processes in the claim.

claim 10, which is dependent on claim 9 and then on claim 1, has no dependency on claims 4-8. It is suggested the phrase “see above claims 4-9” be removed from the claim.

Claim 23, an independent claim, is objected to because of the following informalities: there is no recitation of the limitations “first communication path” and

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“second communication path” in the previous sentences of the claim. The article word “the” in “the first communication path” and in “the second communication path” should be replaced with the article word “a”.

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Claims 20, 21, 22, 23, and 24 are misnumbered and should be renumbered as 19, 20, 21, 22, 23.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3 & 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 3, the phrase “such as” renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding Claim 10, the phrase “see above claims 4-9” renders the claim indefinite because it is unclear as to what limitations are being referred in claims 4-9.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-5, 8-9, 11-14, 17-21, 23-24** are rejected under 35 U.S.C. 102(e) as being anticipated by Curry et al. (US Patent 6,359,880).

Regarding claims 1, 11, 17 & 18, Curry discloses a communication network for private or limited public wireless telephone communication (**a telephony communications arrangement**, see lines 10-11, col. 1), comprising:

a localized wireless gateway system (internet-based private branch exchange, see element 5, Figure 2), including a PBX (see element 65, Figure 2), which provides at least the interexchange portion of telephone calls for wireless handsets (**the internet-based private branch exchange adapted to communicate to a remote location**, see lines 20-22 and 27-28, col. 5) utilizing a public packet switched data network such as the Internet (**a unique internet-based private branch exchange, over a first communications path using packet-based communications**, see lines 11-14, col. 1), said PBX provides two or more BRI line circuits (**a programmable processor circuit**) to packet service gateway within the wireless gateway system (**control a server at the internet-based private branch exchange**, see element 69, Figure 2) for voice and signaling relating to telephone

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calls that will go to or come in from the Internet (**a first communications path**, see lines 60-63, col. 11);

a plurality of wireless handsets and local landline telephones (**a plurality of packet-communicating endpoint devices**, see elements 1, 9, Figure 2) communicate with the PBX of the wireless gateway system (**each of which is adapted to communicate with the internet-based private branch exchange**, see lines 27-28, col. 5 and elements 5, 65, Figure 2) over a second communications path comprising the wireless air interface, the base stations, and the radio port control units (RPCU) or a second communications path comprising local landline telephones (**over a second communications path**, see elements 3, 9, 61, Figure 2), which is coupled to the Internet via the packet service gateway (**a second communications path which is directly communicatively coupled to the first communications path**, see element 31, Figure 2);

said second communications path is also coupled to domain name server (DNS), PSTN gateway and credit card server (**the second communications path is also communicatively coupled to a plurality of other packet-based servers**, see elements 35, 45, 51, Figure 1) via the Internet (see element 31, Figure 1);

a wireless handset (**packet-communicating endpoint device**, see element 1, Figures 1 and 2), a called party, receives a call from a calling PC (see lines 45-47, col. 20) would result in the handset's home location register (HLR) in the database (see element 33, Figure 1) to be accessed according to the handset's routing control record stored in the domain name server system (**configured and arranged to automatically locate**, see element 51, Figure 1), said HLR identifies the wireless gateway system (**establish communication with the unique internet-based private branch exchange**

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from the plurality of other packet-based servers, see lines 14-15, col. 21) and accesses the wireless gateway system's data tables to determine the access manager (see element 67, Figure 2) with which the called party's handset is currently registered;

the access manager checks its data files to determine which registration zone the called handset is currently registered in and sends a broadcast request through the PBX to the RPCU servicing that registration zone and the RPCU broadcasts a paging signal requesting an answer from the identified handset and the handset responds to the page (endpoint communicating device is configured and arranged to automatically locate and establish communication with the unique internet-based private exchange branch for establishing packet-based communications between packet-based communicating endpoint device and the internet-based private branch exchange, see lines 20-28, col. 21 and Figure 2).

Regarding claims 2, 4, 12, 13 & 20, Curry discloses that when a person initiates an outgoing communication from a handset to a destination, that is intended to route through the internet, the wireless gateway system (internet-based private branch exchange, see element 31, Figure 1) would formulate and transmit the query to the domain name server where the server replies the destination IP address and any associated information to the handset (each of the packet-communicating end-point devices is further adapted to store an IP address, to store a unique code that identifies internet-based private branch exchange relative to the plurality of other packet-based servers, see lines 24-32, 44-57, col. 9 and lines 7-15, col. 10). Curry further discloses that the identification of the handset would be sent to the PBX as a service request (each of packet-communicating endpoint devices is adapted to store a

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**MAC address and to communicate the unique Media Access Controller address to with the internet-based private branch exchange**, see lines 40-43, col. 17). Although Curry does not explicitly show that this address is a MAC address, it is well-known in the art that a MAC address is a physical hardware address that is associated with each packet-communicating endpoint devices for identifying itself in a packet-based data communications network. Therefore, it is inherent that the MAC address would be used when communicating with the PBX in the wireless gateway system **(to communicate the unique Media Access Controller address with the internet-based private branch exchange)**.

Regarding claim 3, Curry discloses a localized wireless gateway system **(internet-based private branch exchange**, see element 5, Figure 2), including a PBX (see element 65, Figure 2), which provides at least the interexchange portion of telephone calls for wireless handsets **(a telephony device**, see lines 20-22 and 27-28, col. 5) utilizing a public packet switched data network such as the Internet (see lines 11-14, col. 1),

Regarding claims 5, 8, 9, 14 & 21, Curry discloses that when a person uses a PC to initiate a communication to a called party **(one of the servers)** using a name address, the PC transmits a name translation query to the domain name server **(adapted to execute a program that causes the packet-communicating endpoint device to search for one of the servers**, see element 51, Figure 1) via the appropriate access server and the internet. In response, the domain name server may execute a direct look-up translation table based translation to an IP address and conditional analysis (see lines 44-57, col. 9) for voice communication. Curry further discloses one form of conditional



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analysis (**search for one of the servers using a selected one of a plurality of search processes**) involves having the domain name server check a home location register to determine which of several possible locations to route a call to in order to reach the called destination (**manifests an acceptable routing path to establish packet-based communication, acceptable routing path is defined in terms of geographical location of one of the servers**, see lines 65-67, col. 9, and line 1, col. 10).

Regarding claim 23, Curry discloses a communication network for private or limited public wireless telephone communication (**a telephony communications arrangement**, see lines 10-11, col. 1), comprising:

a localized wireless gateway system (**internet-based private branch exchange**, see element 5, Figure 2), including a PBX (see element 65, Figure 2), which provides at least the interexchange portion of telephone calls for wireless handsets (**the internet-based private branch exchange adapted to communicate to a remote location**, see lines 20-22 and 27-28, col. 5) utilizing a public packet switched data network such as the Internet (**a unique internet-based private branch exchange, over a first communications path using packet-based communications**, see lines 11-14, col. 1), said PBX provides two or more BRI line circuits (**a programmable processor circuit**) to packet service gateway within the wireless gateway system (**control a server at the internet-based private branch exchange**, see element 69, Figure 2) for voice and signaling relating to telephone calls that will go to or come in from the Internet (**a first communications path**, see lines 60-63, col. 11);

a plurality of wireless handsets and local landline telephones (**a plurality of packet-communicating endpoint devices**, see elements 1, 9, Figure 2) communicate

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with the PBX of the wireless gateway system (**each of which is adapted to communicate with the internet-based private branch exchange**, see lines 27-28, col. 5 and elements 5, 65, Figure 2) over a second communications path comprising the wireless air interface, the base stations, and the radio port control units (RPCU) or a second communications path comprising local landline telephones (**over a second communications path**, see elements 3, 9, 61, Figure 2), which is coupled to the Internet via the packet service gateway (**a second communications path which is directly communicatively coupled to the first communications path**, see element 31, Figure 2);

said second communications path is also coupled to domain name server (DNS), PSTN gateway and credit card server (**the second communications path is also communicatively coupled to a plurality of other packet-based servers**, see elements 35, 45, 51, Figure 1) via the Internet (see element 31, Figure 1);

a wireless handset (packet-communicating endpoint device, see element 1, Figures 1 and 2), a called party, receives a call from a calling PC (see lines 45-47, col. 20) would result in the handset's home location register (HLR) in the database (see element 33, Figure 1) to be accessed according to the handset's routing control record stored in the domain name server system (**configured and arranged to automatically locate**, see element 51, Figure 1), said HLR identifies the wireless gateway system (**establish communication with the unique internet-based private branch exchange from the plurality of other packet-based servers**, see lines 14-15, col. 21) and accesses the wireless gateway system's data tables to determine the access manager (see element 67, Figure 2) with which the called party's handset is currently registered;

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the access manager checks its data files to determine which registration zone the called handset is currently registered in and sends a broadcast request through the PBX to the RPCU servicing that registration zone and the RPCU broadcasts a paging signal requesting an answer from the identified handset and the handset responds to the page (**endpoint communicating device is configured and arranged to automatically locate and establish communication with the unique internet-based private exchange branch for establishing packet-based communications between packet-based communicating endpoint device and the internet-based private branch exchange**, see lines 20-28, col. 21 and Figure 2).

Curry further discloses that when a person initiates an outgoing communication from a handset to a destination, that is intended to route through the internet, the wireless gateway system (**internet-based private branch exchange**, see element 31, Figure 1) would formulate and transmit the query to the domain name server where the server replies the destination IP address and any associated information to the handset (each of the packet-communicating end-point devices is further adapted to store an IP address, to store a unique code that identifies internet-based private branch exchange relative to the plurality of other packet-based servers, see lines 24-32, 44-57, col. 9 and lines 7-15, col. 10). Curry further discloses that the identification of the handset would be sent to the PBX as a service request (**automatic location includes broadcasting its identity**, see lines 40-43, col. 17). In addition, Curry discloses the access manager in the wireless gateway system (internet-based PBX) checks the service profile stored in the visitor location register assigned to the handset and instructs the RPCU to connect the radio channel currently allocated to the calling handset to a specific ISDN channel and

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completes the call connection (**waiting for a communication assignment from the iPBX**, see lines 49-52 and 60-65, col. 17).

Regarding claim 24, Curry discloses that the wireless gateway system (see element 5, Figure 2) would control validation procedures (security is validated) by communicating with a home location register (HLR) associated with the handset (see lines 61-63, col. 10) to limit service to only the handsets authorized by the owner of the system (each packet communicating endpoint device is configured and arranged to establish communication with the unique internet-based private branch exchange only after security is validated with the unique internet-based private branch exchange, see lines 38-41, col. 10).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 6, 7, 15 & 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Curry.

Regarding claims 6, 15 & 22, Curry discloses that a router determines how many hops are the minimum to get to the destination (**acceptable routing path is defined in terms of an optimally minimum number of routing connections**, see lines 21-24, col.

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8). Curry does not explicitly disclose the optimal path is determined over a predetermined period of time.

However, it is well known in the art teaching that the optimal routing path would be measured over a fixed time interval in order to make the minimum number of routing connections meaningful. Otherwise, if the time interval were also varying in each route path hop count, it would introduce a time variable in addition to the varying number of routing connections in each route path.

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the minimum number of routing connections of Curry such that acceptable routing path is defined in terms of an optimally minimum number of route connections identified over a predetermined period of time. The motivation to do so is to measure the optimally minimum number of route connections for an acceptable route path over a fixed time interval because the route connections count would not be meaningful if the time interval is varying when doing the count measurement.

Regarding claim 7, Curry discloses an acceptable routing path for an outgoing call is established from a wireless handset (**endpoint device**, see element 1, Figures 1 & 2) to a voice capable PC (see element 21, Figure 1) by having the access manager of the wireless gateway system (**internet-based PBX, one of the servers**, see lines 20-26, col. 18) instruct the PBX (see element 65, Figure 2) to connect the call to the packet service gateway. Having received the call related information such as the calling party number (**a code uniquely associated with the endpoint device**) supplied to the packet service gateway (**capture**) from the PBX, the packet service gateway initiates communication via the Internet and transmits a translation query to a domain name server where the server

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obtains the destination IP address and formulates a response message back to the packet service gateway and finally to the PC indicating a call to that destination terminal (see lines 26-31, col. 18). The packet service gateway then receives a notification message **(acknowledgment)** from the message and transmits a tone signal back the wireless handset via the PBX, base station, and RPCU, indicating the call acknowledgement **(capture acknowledgement from one of the servers that has been preassigned to communicate with a code uniquely associated with the endpoint device, see lines 1-11, col. 19).**

6. **Claims 10 & 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Curry in view of Voit (US Patent 6,104,711).

Curry discloses all the aspects of the claimed invention as set forth in the above rejections of claim 9 and claim 11 respectively, except fails to disclose the selection of one of the search processes is a function of one or more of the followings: preassigned priority list, cost, time of day, location of target communication destination, a category of service providers, and a type of media. However, Voit discloses conditional analysis utilizes a variety of criteria such as the time (see lines 29-33, col. 9). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the selection of the search processes of Curry such that one of the selection criteria is time. The motivation to do so is to measure the select a different server for the terminal devices to communicate with based on different time of day because one server can provide communications for terminal devices as a standby while another server is scheduled to perform maintenance.

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure with respect to automatic connection between network endpoint devices and internet-based PBX.

US Patent 6,389,005 to Cruickshank

US Patent 6,215,790 to Voit et al.

US Patent 6,125,277 to Tanaka

US Patent 6,075,783 to Voit

US Patent 6,542,497 to Curry et al.

US Patent 6,185,204 to Voit


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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Mew whose telephone number is 703-305-5300.

The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
RICKY NGO  
PRIMARY EXAMINER

KDM  
Art Unit 2664